

K D A I M V E R L I H A I
C A A A G A T G C A A T T A T G G T T G A A G G C T T A T C C A T G C T A T A
K C F S N I F I A S K L E
T A A G T G C T T C C A A T A T T T C A T T G C T T C C A A T T A G A G
K Y V I N L C G Q D F P L
G A A A T A T G T T A T C A A C T T G T G G G C A A G A T T T T C C C C T G
K L E R F T Y H H E L R R
T T A A T T G G A A G A T T C A C T T A C C A T C A T G A A C T T A G A C G G
G S A Y F V L S Q A F V K
T G C A G T G C T A T T T G T T T A A G T C A A G C A T T T G T T A A A

Fig.1

C2GnT3 : MKIFKCYFKHTLOKVVELEF-TLWMSLSLKLINVRFPQDIYLYEYSLSTSPFVRN-RATHVKDEVRYEVNCSGIYEQEPLE : 83
 C2GnT2 : -----MVQWKRLOCLHYLWAGCMATVAIKLSFPLKCDSDHLGLESESOYOYCRNIDYINFLKIPAKRSINCSVTFGDOEA : 80
 C2GnT1 : -----MLRTLRRLRSYPTKYFMVLISLITSVRIHOKPEYSVR-----H--TELAGENPSS-DINCTKLOCBVNE : 69
 IGnT : -----MPISMYEPIISVSSVLIIFISVFNEG-----GDSHORLN-----ISDPLRLTQVCTSFING----- : 54

O*

C2GnT3 : IGKS-----LEIRRRDIIDLEDDVAVMTSDCDIYQILRGVAKILVSKSEKSFPTAYSLSLVVHKDAIMVERLIHAYNOHNHYCIHY : 164
 C2GnT2 : VLOAIENNLVKKRREH-FITHLSLSTRDCEHKAERKEIQFISKEEVEFPAYSMVHEKTIENFERLIRAVYAPONTVCVHV : 164
 C2GnT1 : TOKVKLEILTAKKRRWIPDDYINMTSDCSSIIRKRYIVDEPISKEEAEFPAYSIIVVHKLEMLDRLIRAYMPONFVCVHV : 154
 IGnT : ---K-----TFLKKNKLMHEKSSCKEYLTQSHYIPAPISKEEAEFPAYIMVHHHFDTFARLIRAYMPONFVCVHV : 126

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C2GnT3 : DRKAPDIFKVMNNLAKCSNIFIAKLEAVEYAHISRIQADLNGDLIKSSIQWKYVINCGQDFPLKSNTELIVSELEKKNCA : 249
 C2GnT2 : DEKSEEFKEAKAISCENFASKIVRVVYASMSRVQADLNGMEDLIQSSPMKYFLNCTGTFPKSNAMVQALKNLNGR : 249
 C2GnT1 : DTKSESYLAAMGASCSNIFVASRLESVYASMSRVQADLNGCKDLYMSANMKYLLINCGMDFFPKTNLETVRKKLNGE : 239
 IGnT : DEKATTEKDAVEQLISCENAFASKMEPVWVGGSRIQADLNGIRDLSAFEVSMKYVINTCGQDFPLKTNKEIVQVLEKGFCK : 211

*

C2GnT3 : NMIEIVKPPNSKLERFTYHHELREVPYEVYKLPPIRTNISKEAPBPNIQIEVGSAYENLISOAEVKKIFNNSIVQDFFAMSKDTTSP : 334
 C2GnT2 : NSMSEVPPKHKEKRWKLEFEWARD-----TLHL-TNKKQDPEPNIMETGNAYIVASRDEVQHLKNPSOOLIMVQDTTSP : 328
 C2GnT1 : NMIEIRMPSHKKEKRWKRYENNG-----ALTN-TGVKMLEPLETPLESGSAYIVVSRBYVGVLOQENIOLKLEMAQDTTSP : 318
 IGnT : NITPGVLEPAHAIGRTKIVVQEHLE--KELSYVIRTTALKPEPNIMETGYFGSAYVAUSREFFANFVLHDERAVDILQMSKDTTSP : 294

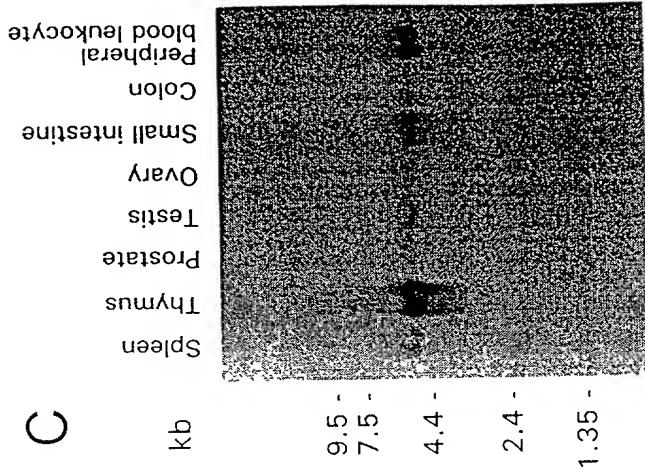
*

C2GnT3 : DEHFWATLIRVPIPGEISRS-AQDVSDLOSCTRUVKNNYEG-----FFYBSCTGSHLSRVCILYGAAELRMHIIKDGWEANKFP : 413
 C2GnT2 : DEHFWATLIRARWMPGSVENHPDIDSDMTSIAIREVKTCGHEGIDKGAHYAPCSGIHORACVMGAGDINMWHONHHLANKFP : 413
 C2GnT1 : DEYLWATLIRIPEPCSLPASHDLSDMQAVARFVKQMFESVSKGAPYEPDCGVHRSVCLIFGAGDINMWHHLANKFP : 403
 IGnT : DEHFWATLIRPVPVPGSMPNA--SWT-----GNIRAIKISDMED-----RHGGCHGYVHGCILYGNGLKWAIVNSPSEANKKE : 367

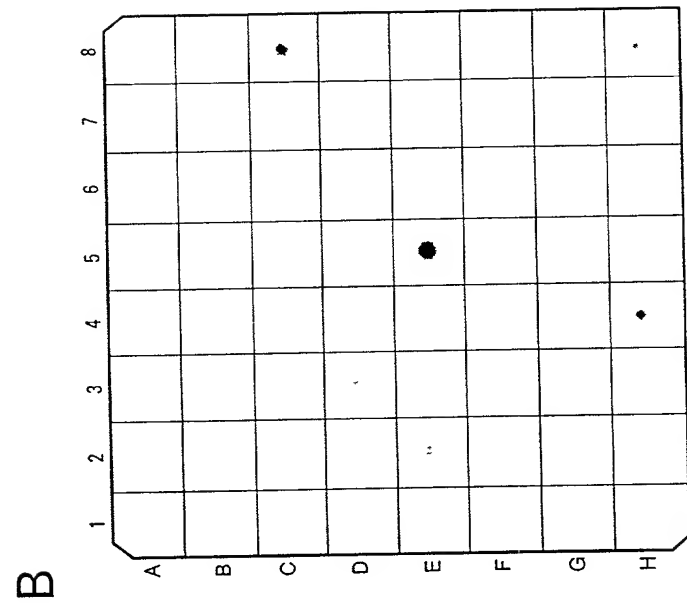
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C2GnT3 : SKVDEIILKCLAEKLEEQORDWITTPSEKLFMDRNLTTTS : 453
 C2GnT2 : PVDDNATLCLAEYRYA-----IYGT----- : 438
 C2GnT1 : VVDLFLCLDEHLEH-----IETLKH----- : 428
 IGnT : LNTYLTVECLLRERER-----TLNQSTAIQPSWYF-- : 400

Fig. 2



C



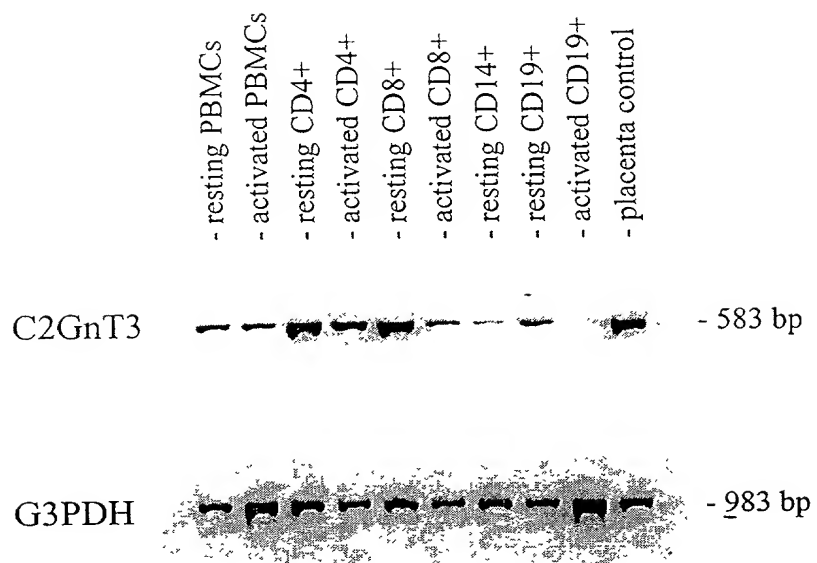
B

	1	2	3	4	5	6	7	8
A	whole brain	amygdala (brain)	caudate nucleus	cerebellum	cerebral cortex	frontal lobe	hippocampus	medulla oblongata
B	occipital lobe	putamen	substantia nigra	temporal lobe	thalamus	sub-thalamic nucleus	spinal cord	
C	heart	aorta	skeletal muscle	colon	bladder	uterus	prostate	stomach
D	testis	ovary	pancreas	pituitary gland	adrenal gland	thyroid gland	salivary gland	mammary gland
E	kidney	liver	small intestine	spleen	thymus	peripheral leukocyte	lymph node	bone marrow
F	appendix	lung	trachea	placenta				
G	fetal brain	fetal heart	fetal kidney	fetal liver	fetal spleen	fetal thymus	fetal lung	
H	yeast total RNA	yeast tRNA	<i>E. coli</i> rRNA	<i>E. coli</i> DNA	Poly(A)	human C _g .1 DNA	human DNA	human DNA

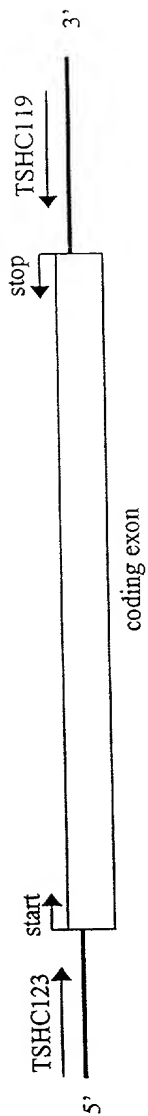
A

Fig. 3

Fig. 4



C2GnT3



TSHC123: 5'-GGGCAGCATTTGCCCTAGTATG-3'

TSHC119: 5'-GATCTCTGATTGGCTCAGTG-3'

Fig. 5